



**Canyon Fuel  
Company, LLC**  
A Subsidiary of Wolverine Fuels, LLC

C0070039  
#5928

**Dugout Canyon Mine**

Kirt Tatton  
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PO Box 1029  
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April 23, 2019

Permit Supervisor  
Utah Coal Regulatory program  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, UT 84114-5801

Re: Removal of Water Monitoring Sites, Canyon Fuel Company, LLC, Sufco Mine, C/007/039

Dear Sirs:

Please find enclosed with this letter an amendment to discontinue the monitoring of sites outside the area of influence of mining at the Dugout Canyon Mine. A description of the information for each monitoring site is provided in the pages attached from the text of Chapter 7 Hydrology.

If you have questions or need addition information please contact Vicky Miller at (435)286-4481.

CANYON FUEL COMPANY  
Dugout Canyon Mine

Robert Marshall  
Technical Services Manager

Encl.

cc: DOGM Correspondence File

**RECEIVED**

**APR 26 2019**

**DIV OF OIL, GAS & MINING**

Sufco Mine

# APPLICATION FOR COAL PERMIT PROCESSING

## Detailed Schedule Of Changes to the Mining And Reclamation Plan

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Sufco Mine

Permit Number: C/007/039

**Title:** Revision to M&RP Remove Water Monitoring Sites

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

**DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED**[illegible]

**Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.**

April 9, 2019

Received by Oil, Gas &amp; Mining

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## DIV OF OIL, GAS & MINING

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

**Permittee:** Canyon Fuel Company, LLC

**Mine:** Dugout Canyon Mine

**Permit Number:** C/007/039

**Title:** Revision to M&RP to Remove Water Monitoring Sites

**Description,** Include reason for application and timing required to implement:

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- ☐ Yes ☒ No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_ ☐ increase ☐ decrease.
- ☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- ☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- ☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
- ☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- ☐ Yes ☒ No 6. Does the application require or include public notice publication?
- ☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- ☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- ☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- ☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?  
Explain: \_\_\_\_\_
- ☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
- ☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- ☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
- ☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- ☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
- ☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- ☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
- X Yes ☐ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- ☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?
- ☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
- ☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
- ☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- ☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach one (1) review copy of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Robert Jay Marshall  
Print Name

R. Jay Marshall Eng Mgr 4/17/19  
Sign Name, Position, Date

Subscribed and sworn to before me this 17 day of April, 20 19

Angelique Durrant  
Notary Public

My commission Expires: May 14, 20 19

Attest: State of Utah } ss:  
County of Cannonville



For Office Use Only:

Assigned Tracking  
Number:

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324

Colton - Monitoring begins 3<sup>rd</sup> Quarter 2008

Locations of these springs are noted on Plate 7-1.

With the addition of 240 acres associated with Federal Coal Lease U-07064-027821, groundwater monitoring location 324 associated with existing water rights identified by an authorized representative of the Conover Trust was added in the third quarter of 2008. Site 324 lies outside the area under lease for mining, thus excluding the influence by mining operations. Following 10 years of monitoring and after the 2<sup>nd</sup> quarter of 2019, site 324 will cease to be monitored.

The purpose of monitoring the above-listed springs will be to assess potential impacts to groundwater systems overlying the Blackhawk Formation due to subsidence and mine dewatering. Springs have been selected for monitoring in the Colton, Flagstaff, North Horn, and Castlegate Sandstone Formations. These springs are reasonably accessible and, based on the historical data, are representative of conditions within their respective formations.

The monitoring of springs 322, 200, 227 and 259 was discontinued after the sampling in the 1st quarter of 2012. Springs 227 and 259 have been mined beneath and subsided and therefore will not be reinstated for monitoring.

- Spring 322 is located outside of the current permit and lease boundary and will not be mined near or beneath, thus being outside the influence of mining. Spring 322 was incorporated into the monitoring program in 2008 to provide a monitoring location **outside** the area of influence to establish a baseline. In 2010 the northernmost panel within the permit boundary was sealed and mining moved to the south approximately three miles.
- Spring 200 has been monitored since 1999. Between 1999 and 2011, the spring has had flow 6 times in 13 years, 1999 had three flows, 2000 had one flow, 2001 had one flow and 2004 had one flow. There has been no flow at Spring 200 since May 2004. No mining has or is planned to occurred near or beneath Spring 200.
- Spring 227 has been monitored since 1999. Between 1999 and 2011, the spring has had flow twice in 13 years, once in 2004 and once in the second quarter of 2011. Mining occurred beneath Spring 227 in 2006, the mined panel was sealing in 2006/2007. Subsidence information for the area is located in the annual reports for the corresponding years.

- Spring 259 has been monitored since 1999. Between 1999 and 2011, the spring has flowed 8 times in 13 years, four times in 1999, twice in 2000 and twice in 2001. Spring 259 has been dry since the samples in 2001. Mining occurred beneath Spring 259 in 2007, the mined panel was sealing in 2007/2008. Subsidence information for the area is located in the annual reports for the corresponding years.
- Spring 321, 324 and 259A are located outside of the current permit and lease boundary and will not be mined near or beneath, thus being outside the influence of mining. Spring 321 was incorporated into the monitoring program in 2007, spring 324 in 2008, spring 259A in 2007 to provide monitoring locations **outside** the area of influence to establish a baseline. The discharge from 321 runs for a short distance and disappears.
- Spring 203 is an improved spring located in Pace Canyon. The spring was not mined near or beneath, thus being outside the influence of subsidence from mining. The monitoring of Spring 203 began in 2000, with the average spring flow being 3.5 gpm during the 18 year period. Including in 2002 when the site was monitored approximately 24 times with the flow remaining consistent.
- Spring SC-116 has been monitored since 1995. Between 1995 and 2018, the spring's flow has averaged approximately 2 gpm. Coal was extracted beneath the spring in the Gil 7 panel from July 2008 thru March 2009. The flow during 2008 through 2009 averaged 3.4 gpm and in 2010 and 2011 the average flow was 4.8, exhibiting no impact for the mining. Considering the length of time since mining was completed subsidence has ceased, as demonstrated in the subsidence information submitted in the mine's annual reports.
- Spring SC-65 and SC-100 are located outside of the current permit and lease boundary, with no mining being done near or beneath the springs. Spring SC-65 was monitored once in 1995 and 1996 then began being quarterly monitoring in 1997. The flow for the over 100 samples at SC-65 averaged 4.3 gpm. Monitoring of SC-100 began in 1995, of the approximate 100 samples the spring has been dry or not accessible 75% of the time. When the spring did flow it averaged 1.1 gpm.
- The monitoring of springs 259A, 324, 321, 203, SC-65, SC-116 and SC100 were discontinued following their sampling in the 2nd quarter of 2019.

**TABLE 7-4**  
**Groundwater Monitoring Program**  
Field and Laboratory Measurement Protocol

<u>Monitoring Wells</u>	<u>Protocol</u>	<u>Comments</u>
GW-10-2	A, 1	Screened in Castlegate Sandstone
GW-11-2	A, 1, E	Screened in Price River Formation
GW-24-1	A, 1	Screened in Castlegate Sandstone
<u>Springs</u>		
SP-20 (S-30)	B, 2, 5	Flagstaff
SC-14	B, 2, 5	North Horn
SC-65	B, 2, 5, E	Colton
SC-100	B, 2, 5, E	Flagstaff (at North Horn FM. Contact)
C-116	B, 3, 5, E	North Horn
200	B, 3, 5, D	North Horn
03	B, 3, 5, E	North Horn
227	B, 3, 5, D	Castlegate Sandstone
259	B, 3, 5, D	North Horn
59A	B, E	Colton
260	B, 3, 5	Colton
MD-1	C, 4	Gilson Seam Workings Discharge
21	B, 6, E	Colton
322	B, D	Colton
324	B, 6, E *	Colton

Protocols

- A Monitoring well: quarterly water level measurement only
- B Spring: quarterly flow measurements
- C Mine Water Discharge, abandoned Gilson Seam workings: quarterly flow measurements
- D Discontinued Monitoring after 1st Quarter 2012
- E Monitoring Discontinued see Section 731.200 for dates and additional information.

Water quality

- 1 Monitoring well: No quality measurements.
- 2 Spring: quarterly operational groundwater quality parameters for two years beginning 3<sup>rd</sup> quarter 1999 after which quarterly field measurements only.
- 3 Spring: quarterly baseline parameters for three years beginning 1<sup>st</sup> quarter 1999 after which quarterly field measurements only.
- 4 Mine water discharge: quarterly operational water quality parameters.
- 5 During wet or dry years (as described in the PHC, Appendix 7-3), flows will be taken weekly between April 1 and August 31 as conditions permit. Also during the first wet or dry year, one operational laboratory sample and one Tritium sample will be obtained at these sites during high and low flow season (requirement completed in 2011).
- 6 Spring: quarterly operational groundwater quality parameters for two years beginning 3<sup>rd</sup> quarter 2007 after which field measurements only. \* At site 324 quarterly operation ground water quality parameters for two years beginning 3<sup>rd</sup> quarter of 2008, after which field measurements only.

**Groundwater Quality Parameters**

FIELD MEASUREMENTS

Water Level or Flow  
pH  
Specific Conductivity  
Temperature

REPORTED AS

Feet or gpm or cfs  
pH units  
µs/cm @ 25°C  
°C



**TABLE 7-5**  
**Surface Water Monitoring Program**  
Field and Laboratory Measurement Protocol

<u>Streams</u>	<u>Protocol</u>	<u>Comments</u>
DC-1	1	Located on Dugout Creek downstream of mine
DC-2	2	Located on Dugout Creek immediately upstream of mine on left-hand fork
DC-3	2	Located on Dugout Creek immediately upstream of mine on right-hand fork
DC-4	3	Located on Dugout Creek upstream of mine on west fork of left-hand fork
DC-5	3	Located on Dugout Creek upstream of mine on east fork of left-hand fork
PC-1a	2, 4**	Located on Pace Creek on the eastern edge of State Coal Lease ML 48435-OBA
PC-2	2	Located on Pace Creek on the western edge of State Coal Lease ML 48435-OBA
PC-3	1	Located on Pace Creek in Section 20, T13S R13E
RC-1	2, 4**	Located on Rock Creek on the southern edge of State Coal Lease ML 48435-OBA
FAN	1	Located on Pace Creek above fan facilities
323	1, 4	Located in SE1/4, SW1/4, SE1/4 of Section 8, Township T13S, R13E

Protocols

- 1 Stream: quarterly operational surface water quality measurements analyzed as per parameters listed below.
- 2 Stream: quarterly operational surface water quality measurements analyzed as per parameters listed below except during first wet or dry years when weekly flow will be obtained from April 1 through August 31, as conditions permit (requirement completed in 2011), in addition to quarterly samples.
- 3 Stream: weekly flow measurements during first wet or dry year will be obtained from April 1 through August 31 as conditions permit. Also during the first wet or dry year, one operational laboratory sample and one tritium sample will be obtained at these sites during high and low flow season (requirement completed in 2011).
- 4 Discontinued Monitoring after 1st Quarter 2012 or \*\* 2<sup>nd</sup> Quarter 2019

**Surface Water Quality Parameters**

FIELD MEASUREMENTS

Flow  
pH  
Specific Conductivity  
Dissolved Oxygen  
Temperature

REPORTED AS

gpm or cfs  
pH units  
µs/cm @ 25°C  
mg/l  
°C